[PEACEWORKS]

BLOGS AND BULLETS

NEW MEDIA IN CONTENTIOUS POLITICS

Sean Aday
Henry Farrell
Marc Lynch
John Sides
George Washington University

John Kelly
Morningside Analytics

Ethan Zuckerman
Berkman Center for Internet and Society

United States Institute of Peace

[PEACEWORKS]

About the Report

In this report from the United States Institute of Peace's Centers of Innovation for Science, Technology, and Peacebuilding, and Media, Conflict, and Peacebuilding, a team of scholars from The George Washington University, in cooperation with scholars from Harvard University and Morningside Analytics, critically assesses both the "cyberutopian" and "cyberskeptic" perspectives on the impact of new media on political movements. The authors propose a more complex approach that looks at the role of new media in contentious politics from five interlocking levels of analysis: individual transformation, intergroup relations, collective action, regime policies, and external attention. The authors are particularly indebted to Sheldon Himelfarb of the Centers of Innovation for his support and contributions to this project. The authors would also like to thank research assistants Brett Borrowman, Juliet Guaglianone, Chris Mitchell, and Rachel Whitlark.

About the Authors

Sean Aday is an associate professor of media and public affairs and international affairs at The George Washington University, and director of the Institute for Public Diplomacy and Global Communication. **Henry Farrell** is an associate professor of political science at The George Washington University. **Marc Lynch** is an associate professor of political science and international affairs at The George Washington University and director of the Institute for Middle East Studies. **John Sides** is an assistant professor of political science at The George Washington University. **John Kelly** is the founder and lead scientist at Morningside Analytics and an affiliate of the Berkman Center for Internet and Society at Harvard University. **Ethan Zuckerman** is senior researcher at the Berkman Center for Internet and Society at Harvard University and also part of the team building Global Voices, a group of international bloggers bridging cultural and linguistic differences through weblogs.

Cover photos: iStock.

United States Institute of Peace
1200 17th Street NW, Suite 200
Washington, DC 20036-3011

Phone: 202.457.1700
Fax: 202.429.6063
E-mail: usip_requests@usip.org
Web: www.usip.org

Peaceworks No. 65. First published 2010.

CONTENTS

PEACEWORKS • AUGUST 2010 • NO. 65

[If new media change the politics of unrest, revolution, violence, and civil war, then governments and civil society need to understand how, so as to better respond to events as they are happening.]

Summary

- New media, such as blogs, Twitter, Facebook, and YouTube, have played a major role in episodes of contentious political action. They are often described as important tools for activists seeking to replace authoritarian regimes and to promote freedom and democracy, and they have been lauded for their democratizing potential.
- Despite the prominence of "Twitter revolutions," "color revolutions," and the like in public debate, policymakers and scholars know very little about whether and how new media affect contentious politics. Journalistic accounts are inevitably based on anecdotes rather than rigorously designed research.
- Although data on new media have been sketchy, new tools are emerging that measure linkage patterns and content as well as track memes across media outlets and thus might offer fresh insights into new media.
- The impact of new media can be better understood through a framework that considers five levels of analysis: individual transformation, intergroup relations, collective action, regime policies, and external attention. New media have the potential to change how citizens think or act, mitigate or exacerbate group conflict, facilitate collective action, spur a backlash among regimes, and garner international attention toward a given country.
- Evidence from the protests after the Iranian presidential election in June 2009 suggests the utility of examining the role of new media at each of these five levels.
- Although there is reason to believe the Iranian case exposes the potential benefits of new media, other evidence—such as the Iranian regime's use of the same social network tools to harass, identify, and imprison protesters—suggests that, like any media, the Internet is not a "magic bullet." At best, it may be a "rusty bullet." Indeed, it is plausible that traditional media sources were equally if not more important.
- Scholars and policymakers should adopt a more nuanced view of new media's role in democratization and social change, one that recognizes that new media can have both positive and negative effects.

Introduction

In January 2010, U.S. Secretary of State Hillary Clinton articulated a powerful vision of the Internet as promoting freedom and global political transformation and rewriting the rules of political engagement and action. Her vision resembles that of others who argue that new media technologies facilitate participatory politics and mass mobilization, help promote democracy and free markets, and create new kinds of global citizens. Some observers have even suggested that Twitter's creators should receive the Nobel Peace Prize for their role in the 2009 Iranian protests.[1] But not everyone has such sanguine views. Clinton herself was careful to note when sharing her vision that new media were not an "unmitigated blessing." Pessimists argue that these technologies may actually exacerbate conflict, as exemplified in Kenya, the Czech Republic, and Uganda, and help authoritarian regimes monitor and police their citizens.[2] They argue that new media encourage self-segregation and polarization as people seek out only information that reinforces their prior beliefs, offering ever more opportunities for the spread of hate, misinformation, and prejudice.[3] Some skeptics question whether new media have significant effects at all. Perhaps they are simply a tool used by those who would protest in any event or a trendy "hook" for those seeking to tell political stories. Do new media have real consequences for contentious politics—and in which direction?[4]

The sobering answer is that, fundamentally, no one knows. To this point, little research has sought to estimate the causal effects of new media in a methodologically rigorous fashion, or to gather the rich data needed to establish causal influence. Without rigorous research designs or rich data, partisans of all viewpoints turn to anecdotal evidence and intuition. It seems improbable that such a massive change in political communication would not matter, even if the data to demonstrate the effects are lacking and older forms of political communication and mass media continue to shape political outcomes. Former British prime minister Gordon Brown has suggested that new media can actually prevent genocide: "You cannot have Rwanda again because information would come out far more quickly about what is actually going on and the public opinion would grow to the point where action would need to be taken." Perhaps, but Michael Jackson's death drove discussion of Uighur protests against the Chinese government off Twitter,[5] and new media have paid little attention to ongoing strife in the Congo. Even coverage of the devastating 2010 earthquake in Haiti had real problems. The earthquake was a top-trending topic on Twitter, which allowed millions to get information, and even to put pressure on the U.S. Air Force to allow relief flights into the Port-au-Prince airport. However, mainstream media outlets may have benefited more from Twitter than ordinary citizens.[6]

Without rigorous research designs or rich data, partisans of all viewpoints turn to anecdotal evidence and intuition.

The answers to these questions have important consequences for politics and policy. The Internet could be a powerful force for political freedom. To harness its power, Secretary Clinton has argued, the United States must "put these tools in the hands of people around the world who will use them to advance democracy and human rights, fight climate change and epidemics, build global support for President Obama's goal of a world without nuclear weapons, and encourage sustainable economic development." Similarly, a growing number of analysts argue that supporting Internet freedom is crucial to bringing about regime change in Iran, as access to information and the freedom to connect will empower the Green Movement against the current regime.[7]

But these assumptions, however plausible, remain largely untested. Will a freer Internet empower the Green Movement in Iran or will it simply allow the incumbent regime to dominate a new terrain? To make good policy, policymakers and advocates need to understand not only who is winning and who is losing, but *why* one side is winning or losing. This requires

much more systematic thinking about the relationship between new media and politics. If new media change the politics of unrest, revolution, violence, and civil war, then governments and civil society need to understand how, so as to better respond to events as they are happening. If certain patterns of communication are associated with a greater likelihood of violence, then these patterns must be identified as far in advance as possible. If greater access to information technology makes violence less likely, then technology policy must be integrated into the standard toolkits for conflict prevention and democracy promotion.

This report casts a critical eye on the conventional wisdom about the effects of new media on contentious politics. But it goes beyond skepticism to identify how our understanding of these complex relationships could be improved and how this knowledge could be applied to major policy issues. The report delineates *five distinct levels of analysis* at which new media may plausibly affect politics and proposes research questions and hypotheses in each area: individual transformation, intergroup relations, collective action, regime policies, and external attention. This report, like the body of work it criticizes, largely draws on the fragmentary evidence and anecdotes that are available. But it also points to new methodologies and technologies that could allow for progress. Ultimately, this report will serve as a guide for policymakers and advocates seeking to use new media to advance their goals.[8]

The report delineates five distinct levels of analysis . . . *individual transformation, intergroup relations, collective action, regime policies, and external attention.*

Improving the Analysis of New Media and Contentious Politics

The shaky methodological foundations of the understanding of the relationship between new media and contentious politics are a problem for policymakers and activists as well as social scientists. Acting effectively in the world requires getting the causal relationships right. Research design matters. Many claims currently made about the effects of new media are blind to hidden variables, confuse output with impact, or assume causal relationships that may be spurious. The first step must therefore be to get the research design right. The lack of data, a problem that is addressed later in this report, can be overcome (i.e., through better processing of online information in multiple languages), but data will only help if used in the right ways, with careful attention to which questions they can help answer.

Research Design

Journalistic accounts usually prefer good stories to complex arguments—and, in particular, heroic accounts of scrappy activists to serious examination of how new media affect political action. Here are some guidelines for thinking more rigorously about such effects:

- **Case selection**. The effects of new media cannot be understood by focusing only on their apparent successes. Equally important are cases where new media had no effect or even had a detrimental effect. For example, blogs and Facebook were credited for sparking activism in Egypt but generated much less protest in other Arab countries facing similar political and social problems. To understand the impact (if any) of blogs and Facebook, both successes *and* failures must be understood.
- **Counterfactuals**. Similarly, policymakers, activists, journalists, and scholars must ask whether episodes of contentious politics would have emerged without new media. For example, in 2005, Egypt's elections, as well as American pressure to liberalize, might have created openings for protest with or without blogs and Facebook. The Revolutionary Armed Forces of Columbia's (FARC) unpopularity in Columbia might have sparked a popular backlash even without organizing on Facebook. In Iran, the outcome of the 2009

To understand the impact (if any) of blogs and Facebook, both successes and *failures must be understood.*

presidential election might well have triggered similar protests had Twitter never existed. In other words, new media might play an intermediary role but be neither necessary nor sufficient for contentious politics.

- **Hidden variables**. Focusing on new media may divert analysts from the real causes. A battle between elite actors (say, between the military and business interests) may be the real drivers of a political conflict, even if they are only dimly perceived through the lens of new media. Protest activity may derive from economic hardship, local conflicts, or a political event (such as an election or leadership transition) rather than by the new media. In Kuwait, for instance, the death of the emir and transition to a new leader created an opening for political debate for bloggers who had previously been largely apolitical.
- **Causal mechanisms**. Political scientists frustrated with indeterminate macronarratives have increasingly turned to testing more precise causal mechanisms—small steps within a larger analytical narrative that may be more amenable to testing. It may be impossible to determine whether Internet access leads to democracy, but it may be possible to test whether access to the Internet increases individual propensity to take risky political action or lowers the transaction costs for organizing a political protest. This could also be useful for policy, since research focused on causal mechanisms can better predict the likely effects of manipulating a single variable (such as increasing the freedom of information available to Iranians, or making a concerted effort to change the distribution of opinions within the Iraqi blogosphere). It does carry the risk of missing out on system effects.
- **System effects**. Changes at one level of analysis, as described below, may be mutually reinforcing, but they may also work at cross-purposes with changes at another. An effective research design often needs to consider the interaction among different variables, rather than highlight a single change in isolation. For instance, new media may lower transaction costs for organizing protests, which would presumably make contentious politics more likely, but may also lead to greater elite awareness of and responsiveness to public complaints, thereby preempting protests. Or growing access to new media may improve the economy and create opportunities that take people away from politics even as the costs of such organizing go down.
- **New media outlet selection**. Focusing only on sympathetic actors within a broader political milieu, or on a limited set of new media sources, can produce highly misleading conclusions. A study that assumes, for instance, that new media will favor liberal actors may ignore how they also empower illiberal actors. A study of English-language blogs may miss important and different online political dynamics in other national languages. Seeing the bigger picture—which includes the political impact of actors who are not online—and capturing the full spectrum of online participants will make for more robust analysis.
- **Strategic interaction**. Many accounts focus on the citizen protesters and ignore rivals as they take countermeasures. States can respond to the perceived success of activism and prevent its replication. They can also use and regulate new media to serve their own ends and undercut challenges to their authority and reputation.[9] Few incumbents want to endure their own "Twitter revolutions," and thus Chinese authorities acted quickly to shut down Short Message Service (SMS) and the Internet when the Uighur protests in Xinjiang began in 2009. In the most disturbing manifestation of countermeasures, authoritarian regimes use new media to locate, target, and arrest dissidents, as when the Iranians circulated pictures of protesters for loyal members of the public to identify.[10] Competing political movements will also adopt effective new technologies, erasing the

short-term advantages that might be gained from the early adoption of new media platforms.

Data

The second problem with examinations of new media in contested politics is sparse data. Conclusions are generally drawn from potentially nonrepresentative anecdotes and/or laborious hand coding of a subset of easily identified major (usually English-language) media. At the same time, there is progress in developing viable techniques to collect and analyze vast amounts of data from the Internet. Ideally, these techniques will capture the flow of information and communications in real time, while also reaching back far enough to establish baseline conditions from which significant deviations stand out. They must also identify and trace a sufficiently representative selection of new media. Conflict is inevitably Rashomon-like: different people will experience and interpret the same events in different ways. Focusing on a handful of news outlets—or a network of personal contacts within the country—could bias any observer's understanding. Finally, they must work in multiple languages, not only English.

Two technological changes make it possible to survey a wide array of traditional and new media, to acquire a large amount of information in real time, and to measure its content rapidly and accurately. The first change is the widespread adoption of syndication formats, including RSS and Atom. Syndication allows a software program to "subscribe" to a URL and be alerted when new content is posted to that URL. Aggregators designed for research purposes can subscribe to thousands of feeds, retrieving every story posted to a weblog or newspaper Web site, a process that is far more efficient and accurate than previous spidering-based approaches to data collection. The second change is that tools that allow the automatic analysis of content are becoming more widespread, powerful, and affordable. Tools such as OpenCalais from Reuters now offer these capabilities via Web services, allowing researchers to classify fifty thousand documents per day for free. Several new approaches draw on these technological changes:

- **Link analysis**. The networks that exist among Web-based media that habitually interlink, such as blogs and many traditional media outlets, can be mapped. One way to do this is to analyze linkage patterns, as Morningside Analytics did with data used in this study. Networks are increasingly recognized as important motivators not only of social phenomena but also of politically consequential behaviors. For instance, terrorist recruitment often draws on preexisting networks of friends and acquaintances. By mapping networks of new media, analysts can determine who is talking to whom, identify key nodes or hubs that link many other media sources, and identify apparent patterns of affinity or antagonism. Pairing network analysis with basic content analysis allows analysts to identify the central identity of different media sources and of the networks in which they exist. A study of the American political blogosphere demonstrated a pattern of partisan clustering that may suggest a polarizing effect for new media.[11]
- **Content analysis**. The specific content that is published or discussed in new media and how this content spreads across networks can be measured. An example of a content-analytic tool is the Berkman Center's Media Cloud project, which this study also employs. It is an open-source software package that monitors a large array of digital media, processes massive amounts of text, and identifies and displays patterns. Specifically, it subscribes to tens of thousands of RSS or Atom feeds, collecting newly published stories shortly after publication and indexing them for analysis and retrieval.

Networks are increasingly recognized as important motivators not only of social phenomena but also of politically consequential behaviors.

Media Cloud tracks the appearance of a word or phrase across media sources and across time, as well as words that commonly appear in conjunction with the search term. Media Cloud can compare patterns of appearance and conjunction across sources and also retrieve the text or Web page of any story, allowing more detailed and careful analysis. The existing system also offers simple graphic visualization of these results.

- **Meme tracking**. Identifying the flow of specific concepts, terms, or issues through new media can help establish causality. Richard Dawkins coined the term "meme" to describe ideas or other discrete cultural forms that can spread from individual to individual, perhaps changing as they do, in processes that are loosely analogous to genetic evolution. As Jon Kleinberg and his colleagues argue, sophisticated means of data analysis can be used to track how individual phrases (which are the closest equivalent to memes that can be analyzed on the Internet) are transmitted across electronic networks, changing and mutating as they do. Meme tracking can answer the question of whether ideas move from the blogosphere to the mainstream media or vice versa, or whether they originate with one sector of political society rather than another. For example, Jure Leskovec, Lars Backstrom, and Jon Kleinberg have shown that prominent political memes typically spread from mainstream media to blogs, rather than vice versa, with characteristic patterns of spikes in the intensity of discussion.[12] Tracking can also, within limits, help us understand how memes change as they move across communities.

Sophisticated means of data analysis can be used to track how individual phrases . . . are transmitted across electronic networks, changing and mutating as they do.

This report presents brief examples of how such methodologies might be applied to cases of political contention, and concludes by fleshing out an appeal for innovative research to offer new applications and solutions to these data problems.

The Political Effects of New Media: Five Levels of Analysis

Determining how new media might affect contentious politics requires unpacking this concept. This report argues that there are five distinct levels at which new media can matter: individual transformation, intergroup relations, collective action, regime policies, and external attention. These levels capture distinct pathways by which change might be manifest and measured. The relationship among the different levels may be mutually reinforcing, as changes in individual attitudes align with changes in the possibilities for collective action and the nature of external attention. But they may also be nonlinear: change at the individual level, for instance, may push in a different direction than do the dynamics of external attention.

Individual Transformation

New media may affect contentious politics via their effect on individuals who either participate in or are exposed to such communication flows. Some individuals may develop *new competencies* through their exposure to or participation in new media, allowing them to participate more readily or effectively in real-world politics or to process information differently.[13] For example, women may find it more possible to engage in a mediated public sphere than in real-world contentious politics, giving them the sorts of experience with public political engagement that in the past would have been denied them.[14] Alternatively, new media could make citizens more *passive*, by leading them to confuse online rhetoric with substantial political action, diverting their attention away from productive activities.[15] New media may also alter or reinforce political attitudes. For example, exposure to jihadist Internet sites may play a role in radicalization, just as exposure to liberal or objective

Alternatively, new media could make citizens more passive, *by leading them to confuse online rhetoric with substantial political action.*

Internet sites may convince a radical Islamist that violence should not be considered legitimate.[16] Plausible questions for further research include:

- Does participation in or exposure to new media lead to new political competencies?
- Does it change political attitudes, orientations, or identities?
- Does it intensify political attitudes, orientations, or identities (i.e., radicalization)?
- Does it produce a more active or passive approach to political action (i.e., reducing or increasing propensity to engage in off-line political activity)?

Such questions could be examined through instruments that assess individual attitudes, expectations, or beliefs, such as experiments, survey research, focus groups, and structured interviews.

Intergroup Relations

New media may reshape discussions and debates within and across groups in a society, changing intergroup relationships and attitudes. Optimists see the Internet as generating positive connections, spreading information, and proliferating points of contact across political, sectarian, or geographic divides. Pessimists, such as Cass Sunstein, fear its ability to polarize, as people seek out congenial relationships and bias-confirming information.[17] Which is right? Do new media tend to "bond" group members to one another, or do they "bridge" members of different groups? Evidence would be found in shifting patterns of intergroup attitudes, relationships, and connections rather than in new forms of political contentious action per se. For instance, anecdotal evidence suggests that in the Middle East text messages and Internet-circulated videos, such as the cell-phone video of the hanging of Saddam Hussein by what appeared to be a Shi'a militia, have circulated virally throughout the region and sparked genuine outrage, increasing "Sunni" identification among many Arabs. But the causal impact of these new media remains unclear. Further research questions include:

Do new media tend to "bond" group members to one another, or do they "bridge" members of different groups?

- Do new media foster or undermine connections among like-minded people or groups?
- Do new media foster or undermine connections between different groups?
- Do new media have a distinctive role in spreading propaganda or hateful images?
- Do new media help reinforce in-group identity in preconflict and conflict situations?
- Can new media be used to further cross-community communication in post-conflict situations?

Link analysis is useful here, as linkages help measure contact within and across political or societal boundaries. Survey research can also suggest whether consumers of new media tend to consume material produced by people in their in-groups, people in their out-groups, or third parties. Finally, experimental research in the laboratory or field can best measure the causal impact of exposure to different kinds of media.

Collective Action

New media may also affect the potential for individuals and groups to organize, protest, or take other forms of collective action. For example, both the Iranian protests and the ethnic violence after the 2008 Kenyan election involved collective action, and both are cited, rightly or wrongly, as having been driven by new media. There are a number of plausible mechanisms through which new media can make action easier or more difficult.[18] Social media may reduce the

transaction costs for organizing collective action, by facilitating communication and coordination across both physical and social distance. The networked nature of social media may undermine hierarchical, top-down movements and generate new forms of "flat" social movements.[19] More broadly, new media may change the political opportunity structure by publicizing splits among the ruling elite, creating lines of communication for challengers to engage segments of the elite in new ways, or by drawing international attention to local problems. Yet another possibility is that new media will change perceptions about the real distribution of opinion within a society, so that others feel safer coming forward in support of a previously taboo position once they see how many online peers share their views. These possibilities point to several plausible research questions:

- Do new media reduce transaction costs for contentious political action?
- Do new media create "flat" rather than hierarchical networks of collective action?
- Do new media more effectively create and disseminate focal points, such as the iconic image of Neda Agha-Soltan's murder in Iran?
- Do new media change political opportunity structures (e.g., by attracting international attention, exposing internal elite divisions and fissures, or by building new openings into the political elite)?
- Do new media create different collective understandings of the distribution of societal opinion (i.e., change beliefs about what others believe)?

This level of analysis would most likely require careful case study research in order to assess the changes produced by the various proposed mechanisms.

Regime Policies

Much literature on new media and contentious politics has implicitly assumed that these new forms of communication primarily help activists against regimes. But although regimes have often been caught off guard by new media activism, they have also responded by co-opting, shutting down, or overwhelming activists.[20] Regimes may learn from the experience of other countries and increasingly act preemptively against particular new media forms when conflict might be brewing (for example, China's blocking Twitter during a tense period shortly after the Iranian "Twitter revolution"). Tactics at the disposal of such regimes, which often boast experienced and unconstrained intelligence services and secret police, include the direct repression of protesters (often facilitated by online records and identities), false-flag operations designed to disrupt opposition formations, interference with service providers (such as shutting down Facebook, Twitter, or even the Internet), and mobilizing their own defenders online. Such behaviors suggest these research questions, among others:

Regimes may learn from the experience of other countries and increasingly act preemptively against particular new media forms when conflict might be brewing.

- Do repressive regimes learn about how to deal with new media from other regimes' experiences?
- Is the learning curve getting easier for repressive regimes over time?[21]
- Do leaders actively use new media to react to others' use of new media, or both?
- Can regimes use new media just as effectively as do citizens?
- Can regimes divert attention from domestic challenges by using new media to whip up patriotism and xenophobia among their populations?

External Attention

New media may garner attention from outside actors, mobilizing political sympathy or hostility and creating new opportunities to generate power internally. The Iranian Twitterers, for instance, framed the confrontations around images and actions that attracted Western attention. But their success in doing so likely depended on the rebroadcast of images and footage in traditional (mostly English-language) media. Lebanon's March 14 movement sought to use both old and new media to build a sense of identity with Western audiences, in ways denied to Hezbollah. The Save Darfur campaign has arguably attracted far more attention to that conflict than other conflicts in Africa have garnered.

The limits of Internet solidarity are also clear. The Save Darfur movement mobilized attention and sympathy, but failed to save Darfur.

The limits of Internet solidarity are also clear. The Save Darfur movement mobilized attention and sympathy, but failed to save Darfur. The millions of Twitterers who colored their profiles green in support of the Iranian protesters could not prevent the Iranian regime from attacking its opposition. As one "tweet" cruelly put it, "Note to would-be revolutionaries: you can remove the green tint from your pictures now; it didn't work."[22] The role of new media in shaping external attention and intervention leads to these questions:

- What attracts external attention to one country (say Sudan) and not another (Congo)?
- How does information bias (say, perceptions generated by liberal, educated "bridgebloggers") distort external attention?[23]
- Does external attention lead to "cheap talk" among external supporters like green Twitter profiles, or more costly actions (money, protest)?
- Can international attention push protesters to take risks in the mistaken belief that they will get substantial support from abroad?
- When, if ever, can external attention on its own have internal political consequences?[24]
- Do new media create linkages with diasporas, and can these linkages lead to radicalization? [25]
- Do new media affect the ability of states to engage in counterinsurgency strategies?

Summary

These five levels provide an organizational framework for better understanding when new media serve a functional—and a dysfunctional—role in contentious politics. The hypotheses suggested at each level can then be tested using the guidelines for research design and the appropriate new data sources discussed in the first section. Do communication patterns online change in advance of or after outbreaks of contentious politics? Does communication across online networks resemble or differ from communication in off-line networks or the mass media? Is there evidence of individual attitude or behavioral change? This framework should also help inform policy priorities, whether related to rhetorical action (e.g., did Clinton's "One Internet" speech have a blowback effect by reinforcing fears of U.S. hegemony online?) or active engagement in government-sponsored hacking in support of protest movements.[26]

This report next focuses on Iran, with reference where appropriate to other cases, to illustrate how this framework might be applied. But it must be emphasized that more questions than answers are presented, and that even preliminary assessments of these questions require systematic comparative research across a wider range of cases and with better data.

Illustrating the Approach: Iran

The role of social media has been a major theme in the analysis of the turbulent events in Iran in the year following the June 12, 2009, presidential election. Many observers saw new media as a necessary (if not sufficient) cause of the dramatic rise of the protest movement following the election, while a subsequent backlash has sought to dismiss their significance. The stakes are high both for analysis and for policy, especially as a tentative consensus seems to have emerged that one of the few things that the United States can usefully do for the Iranian opposition is to push for more Internet freedoms.[27] Our framework can help to sort through the conflicting claims by focusing on much more specific causal connections between the new media and Iran's political process.

The stakes are high both for analysis and for policy, especially as a tentative consensus seems to have emerged that one of the few things that the United States can usefully do for the Iranian opposition is to push for more Internet freedoms.

There are reasons to expect new media to matter in Iran independently of observed outcomes. Iran has seen explosive growth in Internet use over the last several years; International Telecommunications Union data suggests that 32.3 percent of Iranians used the Internet in 2007, compared to 4.7 percent in 2002.[28] Among urbanized youth populations likely to be involved in contentious politics, Internet usage is almost certainly higher. It should come as no surprise that Iranian youth and reformists would rapidly take to the Internet as an outlet for expression and organization. The rapid evolution of a robust Iranian blogosphere in the 2000s—and the regime's subsequent crackdown when it became too prominent—echoes past experiences of the rapid rise of independent and reformist newspapers in the 1990s.[29] Indeed, with an estimated 75,000 blogs, the Iranian blogosphere may exceed the size of its entire Arab counterpart.[30]

On the other hand, after a brief period of relatively liberal access to the Internet, the national government imposed a filtering regime that makes it difficult for citizens to access large numbers of Web sites. In fact, according to a recent study, the Internet was more heavily censored in Iran than in any country included in the sample.[31] The government has also impeded the spread of broadband access, fearing that it would further enable Iranians to access sensitive cultural and political material that might undermine the government's control over terrestrial broadcasting and challenge both prevailing mores and the regime's legitimacy. As attention focused on the Internet's role in the protests following the June 12, 2009, election, the government dramatically expanded its control over access and content.[32]

During the election campaign, supporters of both the incumbent president Mahmoud Ahmadinejad and his most important opponent, Mir-Hussein Mousavi, identified the Internet as a tool that might help the opposition to mobilize support. [33] For a brief period, the Iranian Telecommunications Ministry blocked access to Facebook, which opposition candidates had been using to communicate with some of their supporters.[34] When the election was called in favor of Ahmadinejad, large numbers of people took to the streets to protest, claiming that the vote had been fixed. The government responded by arresting perceived leaders and intimidating others through beatings and shootings. Cell phone communications were shut down in Tehran, and Internet access, while not cut off, appears to have been rendered difficult and slow. Although demonstrations have becomes less frequent, the regime's legitimacy has been seriously damaged. Despite threats, it has not so far arrested Mousavi, or Mohammed Khatemi or Ali Akbar Rafsanjani, two former presidents who were perceived as supporting the protesters and the defeated presidential candidate. There are clear signs of internal divisions within both the regime and the religious clerisy.

Even with the rise of government repression, new media gave Iranians more options for receiving and communicating information. However, this information is likely to be limited to

Even with the rise of government repression, new media gave Iranians more options for receiving and communicating information.

New media likely have a modest direct *effect on Iranians' access to new information but a more significant indirect role.*

major news items and simple organizational information (such as the suggestion that protesters converge on a particular place at a particular time). More complex information is unlikely to spread beyond the actors who directly consume it. New media likely have a modest *direct* effect on Iranians' access to new information but a more significant indirect role. Although Iranians surely use the Internet for clandestine access to external media and news sources, they can also access them through more traditional means. Satellite dishes, although illegal, are relatively common, allowing access to BBC's Persian-language service, the Voice of America's Persian News Network (VOA Persian), Radio Farda, and other external sources of information and entertainment. The Iranian regime acted swiftly to prevent foreign journalists and others whom it suspected of mixed allegiances from covering protest activities. It also used its control of terrestrial broadcasting to disseminate proregime propaganda about the protests, to the point that the main Iranian broadcaster's credibility was seriously damaged.[35] This meant a dearth of traditional news content that was sympathetic to the perspective of the protesters.

But this time, both Iranian citizens and satellite television services turned to new media. Journalists in traditional media, for example, followed Iranian new media to mine it for information and ideas that then received wider dissemination. VOA Persian relied extensively on homemade video of the protests, which was sent by Iranians to a special account on YouSendIt and uploaded to Facebook, YouTube, and other online service providers.[36] The BBC's Persian-language service, which enjoys more credibility among Iranians than VOA Persian, also relied on content uploaded by its users.[37] It would be useful to follow the flows of information through networks linking the old and new.

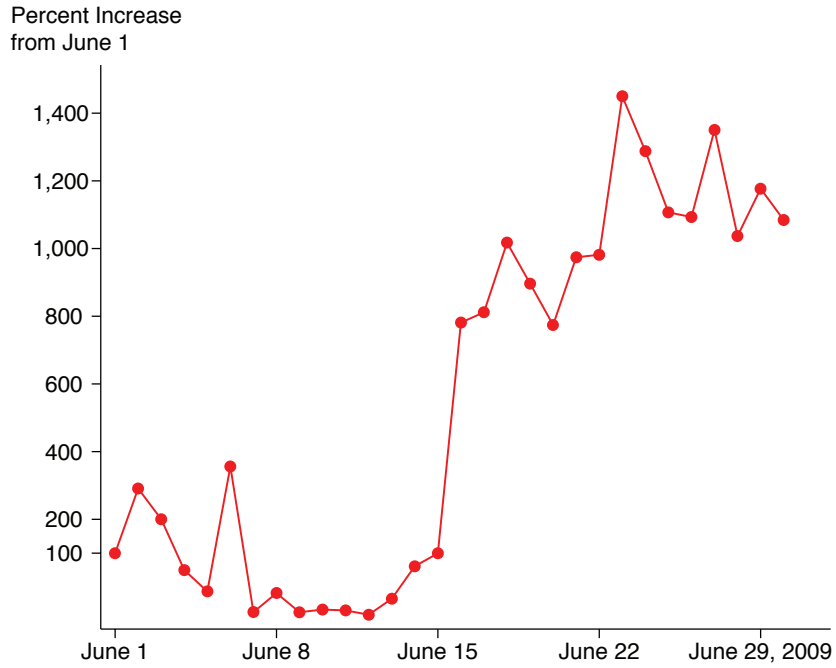
Many observers clearly see new media as central to the evolution of the opposition after the June 2009 election. Indeed, it has become fashionable to argue that leveraging the Internet is the key to finishing the job and allowing the Green Movement to drive the Islamist regime from power.[38] At what level did new media have the greatest impact? And how might they be expected to affect Iranians in the future?

Individual Transformations

There is ample anecdotal evidence from participants in the Iranian Green Movement of an appreciation for the Internet's role in opening up new possibilities and connections but little systematic data about the Internet's significance. To assess whether and how individuals in Iran are being transformed by new media, detailed survey data that tracked change over time, or compared Internet users to nonusers, would be needed. In the absence of such data, this assessment is limited to plausible inferences drawn from indirect indicators.

One area of clear impact stems from the combination of extensive Internet use and pervasive filtering, which has led some Iranians to cultivate important skills. Those who wish to access forbidden content have had to employ clandestine techniques, including proxy services such as Psiphon and The Onion Router (Tor). Since Iran filters culturally sensitive content (e.g., movies) as well as political content, more Iranians than just politically active dissidents have had the incentive to develop these skills. There is some evidence that these skills were deployed after the election. VOA Persian saw a rapid increase in use of its proxy service in the immediate aftermath of the election, stretching capacity so far that an unknown number of users could not access the services.[39] Tor, a well-known relay system for "anonymized" Internet browsing, recorded a substantial increase in the use of its services by Iranians, and a particularly large increase in the use of its unlisted "bridge" relays during this time (see figure 1). The significance of such new competencies is uncertain, however. Individuals already conversant

Figure 1. Rate of Change in Iranian Bridge Users on the Onion Router



Source: Tor

with the Internet may have simply learned new tricks, while the wider mass public found their Internet access disrupted.

There is also anecdotal evidence that new media and text messaging have affected the political identities and perceived solidarities of individual Iranians. Tara Mahtafar claims that the Mousavi campaign was successful in creating text-message viral chains, where people would forward political slogans and anti-Ahmadinejad jokes to one another.[40] The effects of these jokes on people's identity and beliefs about what is politically possible should not be discounted, as they may have had a significant impact in the lead-up to Ukraine's "Orange revolution."[41]

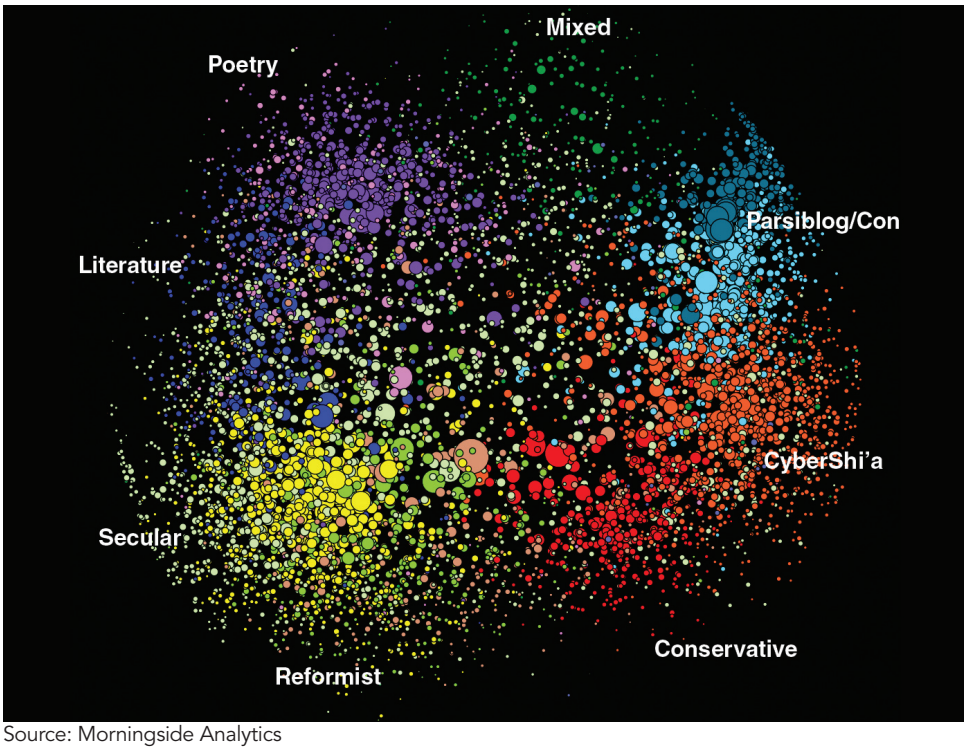
There is also anecdotal evidence that new media and text messaging have affected the political identities and perceived solidarities of individual Iranians.

Intergroup Relations

Iranian civil society flourished in the 1990s, long before there was significant Internet penetration, with a dense network of newspapers and nongovernmental organizations (NGOs) providing the architecture for the reform movement that coalesced around Mohammed Khatemi in the 1997 presidential election. Civil society provided the forum for robust public debate about the nature of the Islamic Republic, women's rights, democracy, and reform. After Khatemi's election, the conservative establishment struck back, using state power to systematically dismantle independent civil society—closing newspapers, arresting and harassing intellectuals, and blatantly intervening in the political process. Prior to the mobilization around the 2009 presidential election, the general consensus among Iranians and outside experts alike was that the reform movement had collapsed. Have new media created different possibilities for civil society? Independent of actual protest behavior, have new media tended to build bridges across political divides or to reinforce those preexisting conflicts?

The rapid growth of the Iranian blogosphere in recent years offers one window into propositions about the impact of the new media on intergroup relations and civil society, through careful study of the linkage patterns and political and cultural affiliations of Persian-language blogs.[42] However, one should be cautious in extrapolating from the linkage patterns observed

Figure 2. Network Map of the Iranian Blogosphere at the Time of the 2009 Election



Source: Morningside Analytics

Note: Larger dots represent the most linked to sites.

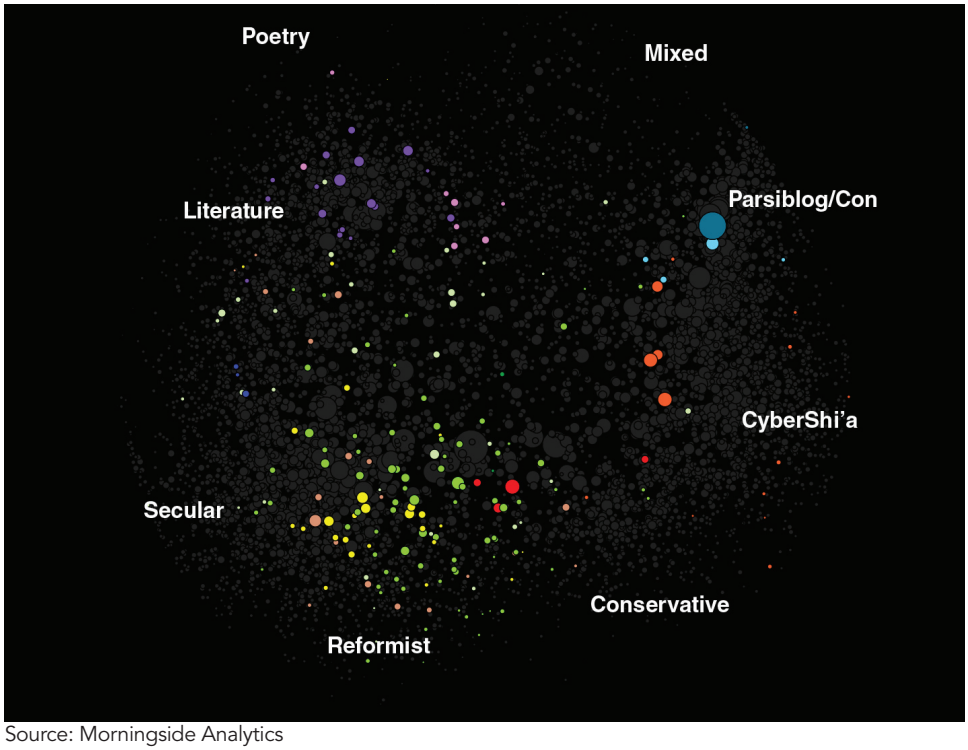
between these blogs to communication patterns in other new media, let alone to off-line patterns of communication and personal exchange. It is difficult to research political affiliations on social networking services such as Facebook except in a superficial way (e.g., by comparing the size of groups affiliated with the different presidential candidates). There are no independent sources of information on instant text messaging. Nonetheless, blogs play an important cultural role in their own right in Iran.[43]

Studying linkage patterns demonstrates quickly that the Iranian blogosphere does not equate to the movement for political reform, nor indeed map onto a simple opposition between progovernment and antigovernment forces.

Studying linkage patterns demonstrates quickly that the Iranian blogosphere does not equate to the movement for political reform, nor indeed map onto a simple opposition between progovernment and antigovernment forces.[44] Instead, the Persian-language blogosphere is loosely organized around a number of clusters that are largely composed of bloggers with shared interests (see figure 2). These clusters include not only reformists, secularists, and religious conservatives, but also bloggers interested in Iranian poetry, Persian literature, "CyberShi'a" religious speculation about the "Twelfth Imam," and mixed-topic blogging.

The relative size of and relationships among these clusters has changed over time. In the past at least, conservative and reformist/secular bloggers have paid considerable attention to one another—as measured by outgoing links from the one to the other[45]—and future work might seek to establish whether this is still true. In addition, there have been historical moments where literary and political blogs engage in dense discussion with one another.[46] Thus, the Iranian blogosphere plausibly resembles a genuine online civil society, albeit one with significant fractures. For example, many religious bloggers appear relatively uninterested in politics, contrary to what many Western observers might expect, and their political interests are not easily predictable when they do manifest themselves. During the Iran election, more—and more important—CyberShi'a blogs linked to Mousavi's Web site than to Ahmadinejad's (see figure 3).

Figure 3. Network Map of Linkages within the Iranian Blogosphere to Mousavi's Web Site



Source: Morningside Analytics
Note: Larger dots represent most linked to sites.

To the extent that blogs are creating an online civil society in Iran, it seems to be friendlier to reformists than to religious conservatives. During the election period, Mousavi's Web site unsurprisingly received many links from secular and reformist blogs. More interesting is that it also received significant numbers of links from bloggers interested in literature and poetry rather than politics. Ahmadinejad's Web site, in contrast, received few links from anyone other than political conservatives and a couple of reformists more likely interested in criticizing than agreeing with him (see figure 4). It is important to stress that these relationships cannot be generalized to the Iranian population at large. However, they do suggest that Mousavi's candidacy interested a broader range of bloggers (including nonpolitical bloggers) than did Ahmadinejad's. To the extent that the Persian-speaking blogosphere influences the future of Iranian politics, it is likely to help, not hurt, the reformist cause.

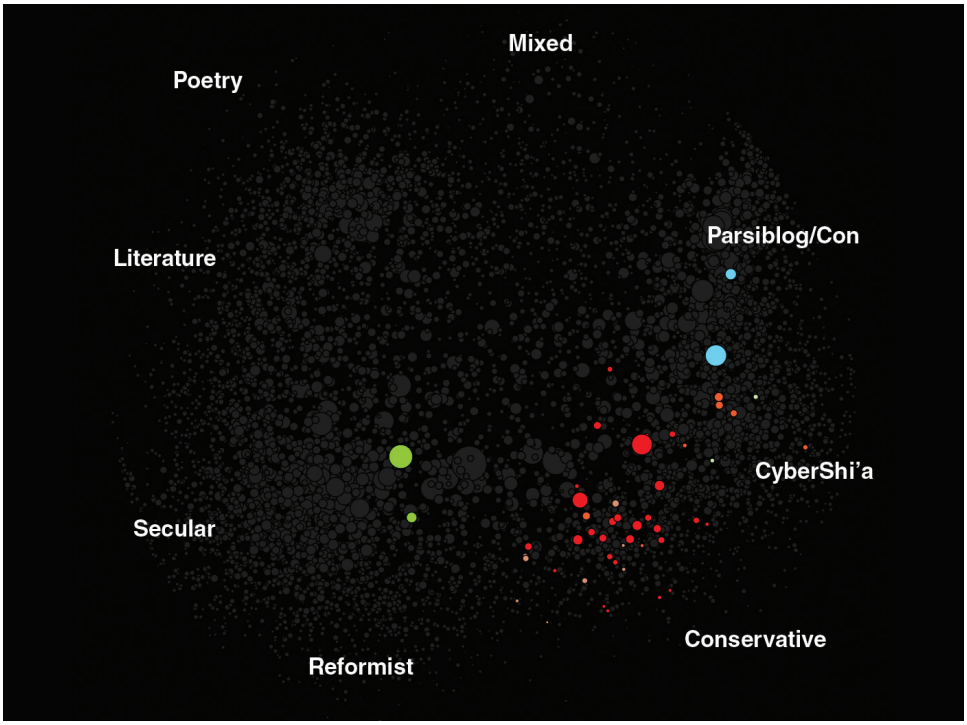
The new media movement of today lacks the institutional infrastructure that characterized reformists in the early Khatemi years. Future research should focus upon whether the virtual civil society created by new media can meaningfully substitute for one built on face-to-face interaction and concrete organizations. It should also focus on questions about the impact of these relationships on collective identities and views of others in society: do users of new media now have harsher or more tolerant views of their political adversaries?

Future research should focus upon whether the virtual civil society created by new media can meaningfully substitute for one built on face-to-face interaction and concrete organizations.

Collective Action

Most of the attention paid to new media in Iran has focused on its role in facilitating collective action against the Iranian regime, particularly the organization of marches and demonstrations.[47] "The main opposition, the Green Movement, has supported and sustained itself by information distribution," argues one typical analysis. "Prompt and mass

Figure 4. Network Map of Linkages within the Iranian Blogosphere to Ahmadinejad's Web Site



Source: Morningside Analytics

communication is vital, given that it is a viral movement made up of many different camps collaborating to protest government corruption and authoritarianism."[48] New media may have helped protesters coordinate and to establish frames to cast the Green Movement in a positive light, expose information embarrassing to the regime, and communicate and coordinate the goals of the movement at times when face-to-face contact was difficult and risky.

Twitter's impact on the protests was almost certainly extremely modest, despite its prominence in driving external attention to the conflict.

Twitter's impact on the protests was almost certainly extremely modest, despite its prominence in driving external attention to the conflict (see the report's discussion of "external attention"). There were probably too few active Twitter users in Iran for it to drive any mass mobilization. Sysomos reports that there were approximately 8,500 Twitter users who self-reported as Iranian in May 2009, and Gaurav Mishra claims that less than 100 of those were active during the election period.[49] Such numbers pale compared to the hundreds of thousands of Iranians who participated in the protest movement at some point. The "Facebook protest" in Colombia generates comparable arithmetic: the number of Colombians who had a Facebook account was dwarfed by the apparent size of the demonstrations.[50] A similar conclusion can be drawn about the role of Kenyan blogs in monitoring the violence after the 2008 Kenyan election. The reach of these blogs, relative to traditional media such as radio, was limited.[51]

Numbers can be misleading, however. Social movements are often sparked and shaped by small numbers of motivated activists who set an example for the broader public. Twitter and other new media could have played an indirect role by communicating information to and among elites, who then disseminated it more widely among the general population through online and off-line networks. It is difficult to document this, since any new media effects are likely to have been swamped by other media with wider circulation. For example, Mousavi's call for mass protests on June 25 was not only circulated on Twitter, but also carried by VOA Persian and the BBC's Persian-language service, which circumvented jamming efforts by broadcasting from new satellites.[52]

Some groups have described using new media to overcome regime repression and to organize for protests. In Iran, the most useful and flexible means of organizing protest was SMS text messaging, especially in a country with a high rate of mobile phone usage. However, the Iranian government was entirely aware of the risks of SMS access and shut down the SMS system for a two-week period.[53] Iranians did have somewhat patchy access to the Internet, and media such as Facebook and blogs may have communicated very basic information about protest activity to Iranians with Internet access (such as the sites of major rallies). As already noted, their effects are impossible to distinguish from those of more traditional media (satellite TV), which was communicating the same information.

Another way in which new media affected collective action was by facilitating communication and coordination for those who could not easily meet face to face. New media helped to link disparate groups and individuals in the absence of formal organization or effective leadership. For instance, Ali Qolizadeh, a Tehran University student activist, described the movement's organization like this: "Small groups of 20 or 30 students band together using social media and operate locally, for instance, distributing fliers door-to-door in their neighborhoods. . . . It is because of the virtual nature of our organizing activities that the government does not have the power to suppress us. It is the key to our success."[54] Such forms of networked organization have weaknesses as well as strengths, however. The absence of clear leadership or internal control opens up opportunities for the regime to sow divisions among opponents. It also makes it harder to fashion a coherent political message or strategy. This happened in Colombia, for example. The Facebook protesters there possessed diverse and not entirely compatible agendas: opposition to the FARC; opposition to kidnapping; the desire for peace and negotiations between the FARC and the government; support for Álvaro Uribe; and opposition to Hugo Chávez. Notably, the families of the remaining hostages chose not to participate, believing the protest to be "polarizing."[55]

New media helped to link disparate groups and individuals in the absence of formal organization or effective leadership.

New media also played an interesting and important role in *framing* protest activity. As scholars of social movements have long argued, framing—the creation of group understandings regarding the meaning and significance of particular aspects of politics—is often crucial to collective action.[56] Cultural entrepreneurs who dislike the status quo seek to create frames that will inspire others to protest. For instance, Andrew Sullivan suggested that an exhortation on Twitter inspired Iranians to call out "God is great" from their rooftops to protest at the regime.[57] This form of protest was already part of the Iranian repertoire of dissidence, having played an important role in the unrest leading up to the Islamic revolution against the Shah. Thus, Twitter did not create the idea but perhaps alerted protesters to the potentially resonant frame. Regime sympathizers may also create counterframes that seek to reconcile citizens to the status quo—denouncing protesters as pawns of the United States and Israel, for instance, to render them politically toxic within much of Iranian society.

Framing—the creation of group understandings regarding the meaning and significance of particular aspects of politics—is often crucial to collective action.

Thus, online content was available both directly and indirectly. While this content was sometimes shakily sourced, it did frame the unrest in ways that favored the protesters and disfavored the regime. Uploaded video depicted large-scale and mostly peaceful demonstrations, as well as violence by the regime against protesters. To the extent that this framing took hold, it suggested that the demonstrations were an expression of general popular unrest. Politicians who favored the demonstrators were also assiduous in their efforts to suggest that the demonstrations were a continuation (and renewal) of the revolution that had toppled the Shah. They also took pains to distance themselves from the United States, as the Obama

administration wisely abstained from overt advocacy on their behalf during the crucial moments when general impressions were formed and narratives established.

There is little but anecdotes about how this framing was received by Iranians. However, the available body of scholarship suggests that it affected those with direct access to these media and that it was disseminated further through existing networks. Satellite television and social networking services such as Facebook distributed videos of the killing of one young woman, Neda Agha-Soltan, caught up in the march.[58] Research suggests that it is important for protesters to signal to the general public that they are "like them" and not oddballs or fanatics.[59] Agha-Soltan, who appeared to be a quite ordinary (albeit telegenic) young woman who covered her hair in the approved Islamic style, plausibly helped demonstrators argue that ordinary Iranians were organizing the protests (and being killed by the regime), not foreign agitators and lackeys whom the regime publicly blamed. Agha-Soltan's visibility as a victim may have helped weaken the regime over the longer term, in ways that would have been less likely had a different victim of the regime been highlighted in media coverage.

Future research should follow up with detailed qualitative and quantitative data gathering on the relationship between new technology and social protest movements. Qualitative accounts could replace existing (and possibly unrepresentative) anecdotes with specific information about the extent to which different groups used new technologies. Are new media typically used by urban elites, or by other segments of the population? How are they used in practice? Quantitative information (both survey polls and nontraditional methods of passive information gathering on individuals' online behavior) could help supplement qualitative accounts with a broader understanding of the relationship between new media and protest. Are there different adoption rates for different technologies? What relationship do new media play with traditional media, and with networks of personalized communication in spreading information? Are protesters more likely to be inspired to political action by traditional media or new media? How do text-based media and visual media differ in their consequences for contentious action?

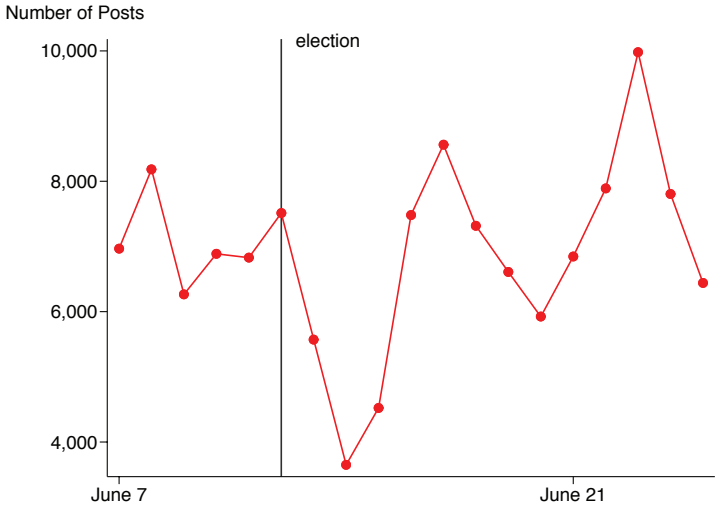
Regime Policies

Of course, the protesters were not the only actors seeking to frame the events of June in politically congenial ways. The Iranian regime responded to protesters' use of the Internet in a number of ways.[60] First, it has sporadically sought to block access to new media by throttling Internet access, disrupting SMS text messaging, and targeting and blocking particular Web sites where regime opponents are seen as having an advantage. Second, it has tried to create its own new media strategy by encouraging government sympathizers to blog and use Twitter and Facebook and other platforms in support of the regime's position. Third, it has sought to frame its opponents' use of the Internet and other media as reflecting their domination by foreign interests. Even if the Internet initially helped the protest movement, it later helped the regime crack down on this movement.

Even if the Internet initially helped the protest movement, it later helped the regime crack down on this movement.

Evidence suggests that during the immediate period surrounding the election, Internet services were disrupted. However, how much this was due to the Iranian government, as opposed to the combination of limited capacity and a massive surge in Internet use, is not clear.[61] It is clear, however, that the Iranian censorship regime targeted a wider set of Web sites during the period surrounding the election. Roughly half of the thirty most important antiregime blogs were inaccessible, as was the popular blogging host site, Blogfa.[62] Figure 5 shows the frequency of posts by Iranian bloggers from June 7 to June 25, 2009, and suggests that the

Figure 5. Frequency of Posts by Iranian Bloggers, June 7–25, 2009



Source: Authors' data

crackdown curtailed blogging for the three days after the election. However, blogging returned to preelection levels soon thereafter, suggesting that Twitter was not the only way to get information from Iran.

Social networking sites such as Facebook were also blocked during the election period. Protesters and their supporters sought to evade these controls through both sophisticated (the use of proxy servers) and simple means (e-mail to supporters outside Iran). For example, the man who took the video of Neda Agha-Soltan's death did not upload it himself, instead e-mailing it to a friend who forwarded it to VOA.[63] SMS text messaging was made unavailable shortly before the election and for some two weeks after it. Mobile telephones were also unusable in the period directly surrounding the election, which may have been intended to disrupt an effort by an organization associated with Rafsanjani to monitor polling stations around the country.[64]

Efforts to disrupt access to the Internet went together with efforts to mobilize regime supporters via the Internet. These efforts seem to have been less successful than the efforts of regime opponents. Previous efforts by the Revolutionary Guard to encourage members of the Basij (the regime's volunteer paramilitary militia) to blog may possibly have helped spur the surge in religious blogging discussed earlier. However, these new religious blogs have been notably uninterested in politics. Efforts by a dozen conservative bloggers to create YouTube videos putting out their side of the story appear to have attracted only a small audience. The regime's postelection efforts to mobilize Iranian Internet users to denounce protesters seem to have had little success. Gerdab.ir, a Web site set up by the Revolutionary Guard to allow Iranians to identify protesters from photographs (hence facilitating their arrest), has generated little interest, including from conservative bloggers. Even proregime conservatives may be unwilling to identify themselves with the regime's internal security apparatus, given controversies over the beatings, torture, and possibly rape and murder of detained protesters. Proregime actors have tried to organize themselves on Twitter and other social media in the wake of the protests, both to spread disruptive rumors and to communicate a proregime message.[65] This could make it more difficult for protesters to use these tools in the future, although the threat that online

Efforts to disrupt access to the Internet went together with efforts to mobilize regime supporters via the Internet. These efforts seem to have been less successful than the efforts of regime opponents.

evidence may be used to identify and arrest dissidents provides a more direct disincentive to future public online activity.

Finally, the regime has sought to frame dissidents' use of technology by suggesting that they are subservient to foreign interests. Early commentary suggested that Mousavi was following a "deceptive campaign strategy, which was a mixture of Obama's model in 2008 and some deceptions and lies of the colored revolutions."[66] The request of a U.S. State Department official that Twitter postpone a temporary shutdown of its service has been depicted in Iranian media as evidence of a "Twitter plot" by Secretary of State Hillary Clinton to undermine the Iranian revolution.[67] This raises an important question about blowback for policymakers, given that American policymakers and pundits often retell this story as a way of trumpeting their successful role in the Green Revolution. Similarly, Iranian state-influenced media depicted an Israeli newspaper's use of material from antiregime Twitterers as evidence that the unrest was backed by an Israeli conspiracy.[68] More recently, the government has sought to use its opponents' reliance on publicly available social networking sites against them in mass trials, and to indict Twitter and YouTube as part of a massive global conspiracy against the Islamic Revolution.[69] As with the frames of protesters and their allies, we do not know how these frames have been received by the Iranian public.

Future research could examine more rigorously how regimes' use of new media has changed over time. Incumbent regimes adapt in response to the experience of other regimes, but the limits to learning are not known. Nor is it known whether learning occurs through passive observation or active information sharing. Current work by researchers at the Berkman Center for Internet and Society and the University of Toronto has done much to establish basic comparative information on governments' Internet-censorship regimes. However, relatively little is known about patterns of dissemination over time, about active use of new media by authoritarian governments, or about how non-Internet media (cell-phone text messaging) are used and censored by incumbent regimes.

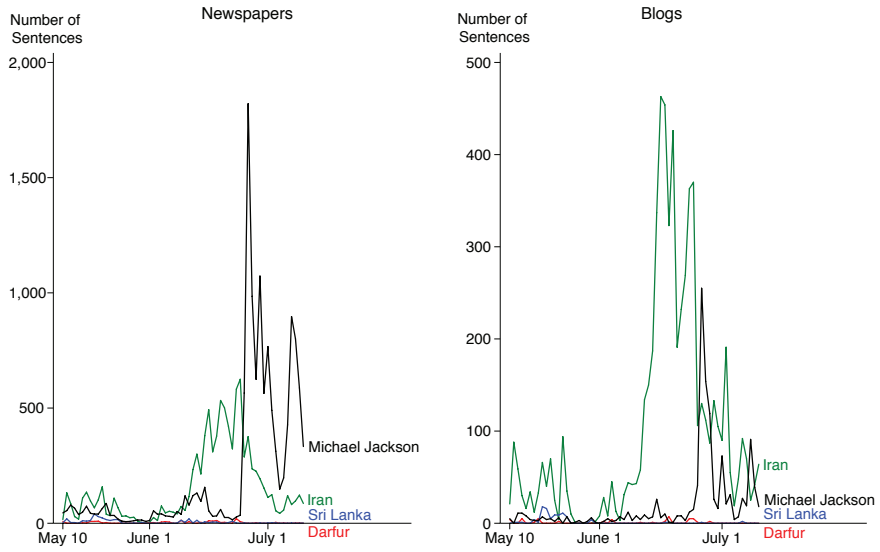
Here, automated data collection can supplement existing information on censorship regimes with new information on active use of the Internet to disseminate information and propaganda by existing regimes. Web-scraping technologies can gather large amounts of information from official and unofficial newspapers, government Web sites, sites run by individual or collective actors linked to the regime, and sympathizers in the population. Meme tracking can establish the circumstances under which incumbent propaganda becomes more widely disseminated among government and nongovernment sites. Extraordinarily little is known about how incumbent regimes use the Internet actively, even though this is becoming ever more important. Gathering data would allow the mapping of relevant relationships, and, over time, test causal arguments about the kinds of tactics adopted by governments, the take-up of government arguments in new media more generally, and so on.

Extraordinarily little is known about how incumbent regimes use the Internet actively, even though this is becoming ever more important.

External Actors

Where Twitter and other new media clearly did matter is in how they conveyed information about the protests to the outside world. Traditional media were at a disadvantage in covering events inside Iran because of restrictions placed on journalists, and thus ended up relying on new media for content. Hence, the outside world's perceptions of the protests were crucially shaped by Twitter (as conveyed through blogs and other means), amateur videos uploaded to YouTube and Facebook, and other sources. This intense focus on Iran cannot necessarily be

Figure 6. Newspaper and Blog Coverage of the Iranian Election, Michael Jackson's Death, Sri Lanka, and Darfur



Source: Media Cloud

replicated in other cases, however, as external attention tends to converge on some issues and not others for reasons demanding further research.

To show how new media helped to focus attention on Iran, the authors of this study drew on the Media Cloud platform to examine stories that focused on Iran in U.S. political blogs and professional media outlets from May 10 to July 10, 2009. For the purposes of comparison, the authors also examined stories that focused on two other major conflicts, Sri Lanka and Darfur, as well as a major media event, the death of Michael Jackson.

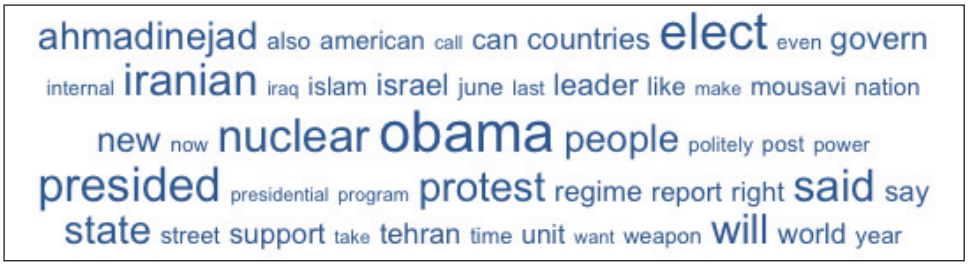
Figure 6 presents the number of sentences devoted to each of these four stories—with separate plots for the newspapers and blogs that Media Cloud currently monitors. Newspapers and blogs should not be compared directly in terms of the total volume of coverage; rather, it is the patterns of coverage in each that are of interest. In both American newspapers and blogs in late June, the Iranian elections were prominently covered. Similarly, another monitoring effort, that of the Project for Excellence in Journalism, found that the Iranian protests occupied 28 percent of the news hole in its sampled set of media in the week ending June 24, outpacing all other stories.

Interest in the Iranian protests may have peaked in the blogosphere before peaking in newspapers. Blog interest peaks on June 6, with 463 sentence mentions. A second blogosphere peak appears on July 2, but more than half the blog sentence references that day come from Andrew Sullivan's Daily Dish. This second peak appears to be less connected to outside events and more connected to Sullivan and team's enthusiasm on that day. However, both blog and newspaper interest in the Iran story drops sharply after Michael Jackson's death was announced on June 25. This is an important, if disheartening, reminder that both new and old media alike can be distracted from geopolitics when celebrities shuffle off this mortal coil.

Media Cloud also captures the content of the indexed sentences by analyzing word frequency. The algorithms discard the most common words and count the appearance of remaining words, comparing the frequencies across sources and groups of sources. Figure 7 shows the terms most closely associated with stories about Iran found in the system during

Both new and old media alike can be distracted from geopolitics when celebrities shuffle off this mortal coil.

Figure 7. Word Cloud of the Terms that Appear in Stories about Iran, May 10–July 10, 2009



Note: Word size represents the relative frequency of appearance, with the largest words appearing in stories most frequently.
Source: Media Cloud

the two months of analysis. Perhaps surprisingly, the term "Mousavi" appears far less frequently than does "Ahmadinejad." This suggests that, despite the attention devoted to the protests themselves, the incumbent remained a more visible figure in news coverage than did the challenger.

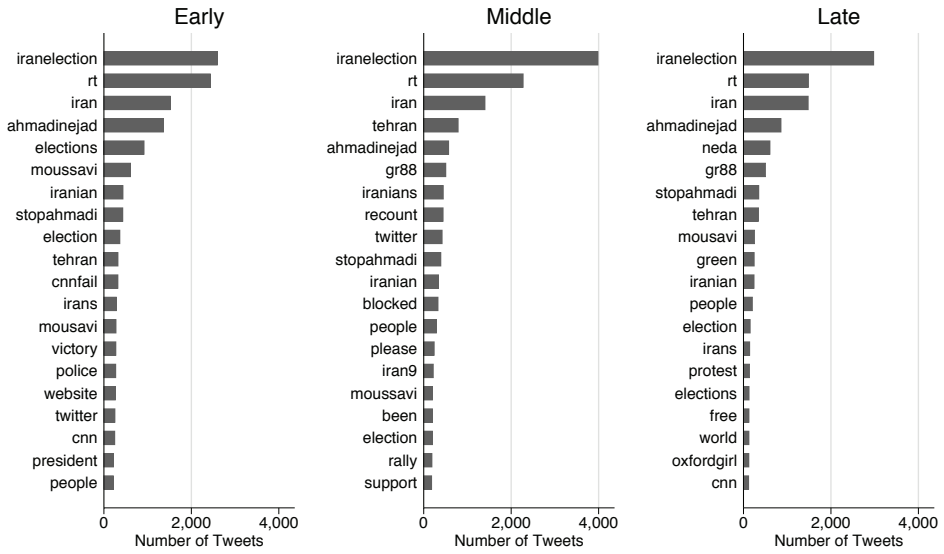
Although Media Cloud does not include data from Twitter, the exploratory techniques outlined here work well with Twitter data. Gilad Lotan of Microsoft Research collected a set of 269,000 Twitter messages ("tweets") associated with the Iranian elections between June 12 and June 30. Analyzing three 5,000-message chunks sampled from Lotan's set—from the beginning, middle, and end of this period—suggests how the dialogue on Twitter changed over the course of two weeks. Figure 8 presents the number of tweets for popular phrases during each period. Some phrases were common in all periods—for example, the obvious "iranelection" and the Twitter abbreviation "rt" (for "re-tweet," or pass along a message). Others appeared mainly in one period. A major topic after the election is "CNNfail," a term applied by Twitter users to CNN's failure to cover the Iranian elections with live reporters on the day of balloting. By the middle of this period, a peak day for Iran-focused Twitter activity, discussion had shifted to rallies and discussions of recounts. In the last period, "Neda" (Agha-Soltan) emerges as the fifth most popular term.

Accurately identifying the content of new media is only part of the story, of course. What of its effects? Margaret Keck and Kathryn Sikkink suggest how activists living under an oppressive regime can leverage the support of actors abroad.[70] They argue that when the regime is unresponsive to activists, these activists may seek support from actors in other states, which will then bring pressure on the original regime in a "boomerang effect." The key conditions that allow this to work are transnational networks of activists, states other than the existing regime that are responsive to these activists, and tools that these states can use to pressure the existing regime. Activists attempted to follow this model, for instance, with the creation of the "United for Iran" network that organized solidarity protests across the United States through Facebook.[71]

The Iranian election suggests that new media can partially substitute for activist networks.

The Iranian election suggests that new media can partially substitute for activist networks. They allow communication to take place across borders, and forms of international solidarity to spring up relatively quickly. Although blogs and other media focused on Iran only for a short period of time, they engaged in solidaristic action. The Obama administration appeared partially receptive to this message. While the administration was careful not to express overt support for the demonstrators, which could have been used by the Iranian regime to delegitimize protests, it did signal its sympathies implicitly, by, for example, asking

Figure 8. Number of Tweets Citing Each Term (June 12–30, 2009)



Source: Gilad Lotan, Microsoft Research

a blogger/journalist who had been highly active in covering the protests, Nico Pitney of the Huffington Post, to ask a question "on behalf of" the protesters.

However, the administration could exert little pressure on the Iranian regime. Its influence was limited by the history of hostile relations between the two countries, a lack of useful contemporary relationships (commercial relations between the two countries being practically nonexistent because of existing sanctions and restrictions), and complications arising from the ongoing indirect negotiations over nuclear technologies. The United States provided mostly symbolic assistance (e.g., asking Twitter not to temporarily shut down for maintenance). Other countries were either in much the same position as the United States or disinclined to support protesters against an existing regime.

Thus, there was little prospect of any short-term "boomerang effect." Nor are there many other obvious causal pathways through which outside influence could have had significant internal consequences. It is likely, as discussed earlier, that externally based media (satellite television and perhaps some Internet sources) that rebroadcast directly into Iran helped protesters coordinate and demonstrate that the protests had significant support. However, this is perhaps better regarded as outside actors helping internal actors indirectly to connect with wider audiences, rather than outside influence as such. Expressions of international solidarity may have affected the attitudes of protesters inside Iran, but any effort to assess these attitudes would be at best highly speculative.

Future research should provide a more rigorous account of the circumstances under which external action can have internal consequences. By combining data scraped from domestic and external media, it could examine the circumstances under which information and memes disseminate from one to the other, the key interlocutors, possible distortions or changes in how information is contextualized in both, and so on. By combining this data with external data sources (on, for example, patterns of funding and internal and external collective action), one could tentatively uncover causal relationships (if any) between online communication across borders and actual political outcomes.

It is likely . . . that externally based media (satellite television and perhaps some Internet sources) that rebroadcast directly into Iran helped protesters coordinate and demonstrate that the protests had significant support.

Conclusions and Further Directions

Conventional wisdom often assumes the world is like a Hollywood movie, in which bad guys with all the tools of oppression at their disposal can be brought down by a band of plucky citizens armed with little more than cell phones and Twitter accounts. In the real world, dictatorial regimes are not nearly as vulnerable, citizens not nearly as organized, and new media not nearly as powerful as these narratives assume. Regimes, such as those in Iran and China, have vast resources of repression with which to control their populations and the media, old and new. Real revolution is usually slow to come, if at all. A year after the "Twitter revolution," Ahmadinejad is still in power, although his regime has lost considerable legitimacy. Similarly, conventional wisdom often paints too rosy a picture of the role of new media in contentious politics, assuming it to be an agent of democracy and peace. In fact, social networking and other new media technologies can just as easily be used to radicalize, exclude, and enrage.

Policymakers have an especially tricky tightrope to walk, as evidenced by the reactions to Clinton's "One Internet" speech.

Policymakers have an especially tricky tightrope to walk, as evidenced by the reactions to Clinton's "One Internet" speech. Both the Iranian and Chinese governments used it as a pretext for rallying their media and citizens against perceived American hegemony. There are diplomatic and strategic ramifications to how policymakers talk about the role of new media in challenging authoritarian regimes. More troubling is the potential moral hazard: such rhetoric may lead regime opponents to believe that the international community will protect and support them with more than words and green Facebook pages. Ultimately, as Clinton implicitly suggested in her address, more and better study of new media's role in contested political action is needed to make good policy. As this report has argued, these future studies need to be cross-cultural, theoretically grounded, empirically varied and sophisticated, and perhaps most importantly open-minded about technology's strengths and weaknesses.

What specific recommendations emerge from present findings?

- **Be skeptical of sweeping claims about the democratizing power of new media**. Although new media can plausibly shape contentious politics, they are only one among a number of important political factors. As this report demonstrates, there remain massive gaps in our knowledge about their effects at multiple levels and the interaction among those levels. The suggestions for improved research design and data in this report are not simply the methodological complaint of academics. If policymakers hope to act effectively, they need to get the causal mechanisms right or else risk wasting effort and resources on ineffective actions—or even making things worse
- **Acknowledge the good and bad effects of new media**. Opening up the Internet may not be a panacea. While a free media may improve the prospects for collective action, the effects on intergroup relations may be more troubling. As the genocide in Rwanda illustrated, traditional media can be used to mobilize and organize ethnic conflict, leading to mass violence—and there is no reason to assume that new media will pay attention if it does, or that such attention will lead to international intervention. New media may be more likely to promote polarization and to provide targeted communication channels for already polarized groups than do traditional forms of broadcasting and mass media. If the United States and other democratic countries want to construct new media platforms, they can adopt one of three broad approaches. First, they can limit use of the platform to groups that are unlikely to foment conflict or violence. This makes it less likely that the platform will have harmful consequences, but also less likely that the platform will succeed. Second, they can seek to engineer platforms so as to encourage

exchange rather than polarization between different groups. Third, they can provide fully open platforms, mindful of the possible risks associated with them. But each of these approaches is problematic in its own way.

- **Beware of backlash**. Although the sentiment behind the push for Internet freedom is admirable, efforts to help antiauthoritarian movements by providing access to new media platforms may have unintended consequences. Regimes remain well financed and effective in their determined efforts to hold on to power, and usually find ways to adjust to new challenges to their control. In future situations of unrest, despotic governments will likely do a better job of disseminating disinformation and using it to discredit nontraditional channels of communication. The United States needs to carefully balance its efforts to promote such freedoms with the risk of a backlash discrediting the activists it hopes to support.
- **Do not mistake information for influence**. Absent a "boomerang effect" feedback loop, or some other meaningful mechanism, information dissemination to the outside world is insufficient to effect significant domestic change. Providing information and content via new media to the outside world can generate sympathy and support, and can also allow this content to be rebroadcast to the country in question. However, unless the outside world can generate real pressure on the regime, or otherwise be helpful, this is unlikely to do more than provide a modest feeling of solidarity. Activists should recognize these limits and work, for example, with less sexy but more robust forms of communication and organization such as wall posters—while leveraging the advantages that new media can sometimes present.

It is important to find a proper balance between knee-jerk skepticism of technology's promise and the techno-utopianism that too often plagues public discourse. As a first step, this report has outlined the research problem, constructed a framework for further analysis, and discussed important new sources of data for that analysis. The next step, the authors believe, is to develop these data sources as part of a rigorously designed research program. This would generate useful knowledge for academics and policymakers alike about how new media does and could affect contentious politics.

Notes

1. Mark Pfeifle, "A Nobel Peace Prize for Twitter?" Christian Science Monitor, July 6, 2009, www.csmonitor.com/2009/0706/p09s02-coop.hmtl.
2. "Respekt: Police Fail to Protect Victims of Neo-Nazi Threats," *Prague Daily Monitor*, September 15, 2009, http://praguemonitor.com/2009/09/15/respekt-police-fail-protect-victims-neo-nazi-threats; Joe Powell, "Amid Censorship and Threats Ugandans Turn to New Media," *Independent*, September 23, 2009, www.independent.co.ug/index.php/column/comment/70-comment/1817-amid-censorship-and-threats-ugandans-turn-to-new-media; Josh Goldstein and Juliana Rotich, *Digitally Networked Technology in Kenya's 2007–2008 Post-Election Crisis*, Internet and Democracy Case Study Series (Cambridge, MA: Berkman Center for Internet and Society, Harvard University, September 29, 2008), http://cyber.law.harvard.edu/publications/2008/Digitally_Networked_Technology_Kenyas_Post-Election_Crisis.
3. Cass Sunstein, "Neither Hayek nor Habermas," *Public Choice* 134, no. (2008): 87–95; Michael Gerson, "Banish the Cyber-Bigots," *Washington Post*, September 25, 2009, www.washingtonpost.com/wp-dyn/content/article/2009/09/24/AR2009092403932.html. For a data-driven discussion, see Eric Lawrence, Henry Farrell, and John Sides, "Self-Segregation or Deliberation? Blog Readership, Participation, and Polarization in American Politics," *Perspectives on Politics* 8, no. 1 (2010): 141–157. For an alternative perspective, see Yochai Benkler and Aaron Shaw, *A Tale of Two Blogospheres: Discursive Practices on the Left and Right* (Cambridge, MA: Berkman Center for Internet and Society, Harvard University, 2010).
4. We use "contentious politics" as a shorthand for actions by individuals, groups, and regimes that typically entail contestation over political means or ends.
5. For more on this, see figure 6 of this report.
6. Joshua A. Keating, "Lost in #Haiti: How Haiti's Disaster Showed Twitter's Limits as a News Medium," *foreignpolicy.com*, January 22, 2010, www.foreignpolicy.com/articles/2010/01/22/lost_in_haiti.
7. James K. Glassman and Michael S. Doran, "The Soft Power Solution in Iran," *Wall Street Journal*, January 21, 2010, http://online.wsj.com/article/SB10001424052748704541004575011394258630242.html; Mehdi Khalaji and Scott C. Carpenter, "America and the Iran Political Reform Movement: First Do No Harm," testimony before House Committee on Foreign Affairs Subcommittee on the Middle East and South Asia, February 3, 2010, www.washingtoninstitute.org/templateC14.php?CID=512.
8. "New media" is an admittedly unsatisfying term that encompasses a diverse array of outlets, such as blogs, "social" media (e.g., Facebook), audiovisual hosting services (e.g., YouTube), text messaging (SMS), Twitter, e-mail, and chat rooms. While any nomenclature can be challenged, the term "new media" is a convenient shorthand for various primarily Internet-based communication technologies and methods that most people can readily differentiate from "old" media. New media generally involve user-generated content, interactivity, and dissemination through networks, but new media differ in their characteristics and potential political consequences. Indeed, perhaps the most important moments involve information that appears on multiple platforms.
9. In part, this involves simply limiting or preventing the use of new media. This also involves the proactive mobilization of new media technologies. For example, Israel's government has enlisted an "army of bloggers" to defend its policies online; China has done the same with its "50 Cent Army"; and Nigeria has sought to recruit bloggers to defend the government online (see "Umaru Yar'adua Regime Launches $5 Million Online War," *Sahara Reporters*, June 16, 2009, www.saharareporters.com/news/3024-umaru-yaradua-regime-launches-5-million-online-war-.html).
10. Evgeny Morozov, "How Dictators Watch Us on the Web," *Prospect*, November 18, 2009, www.prospect-magazine.co.uk/2009/11/how-dictators-watch-us-on-the-web/.
11. Lawrence, Farrell, and Sides, "Self-Segregation or Deliberation."
12. Jure Leskovec, Lars Backstrom, and Jon Kleinberg, "Meme-Tracking and the Dynamics of the News Cycle" (unpublished paper, Cornell University, 2009).
13. Dale Eickelman, "New Media in the Arab Middle East and the Emergence of Open Societies," in *Remaking Muslim Politics*, ed. Robert Hefner (Princeton, NJ: Princeton University Press, 2006); Jon Anderson, "New Media, New Politics: Reconfiguring the Public Sphere of Islam," *Social Research* 70, no. 5 (Fall 2003): 887–906.
14. Sharon Otterman, "Publicizing the Private: Egyptian Women Bloggers Speak Out," *Arab Media & Society* 1 (Spring 2007), www.arabmediasociety.com/topics/index.php?t_article=28.
15. Evgeny Morozov, "The Brave New World of Slacktivism," *foreignpolicy.com*, May 19, 2007, http://neteffect.foreignpolicy.com/posts/2009/05/19/the_brave_new_world_of_slacktivism; Samantha Shapiro, "Revolution, Facebook-Style," *New York Times Magazine*, January 2009, www.nytimes.com/2009/01/25/magazine/25bloggers-t.html?_r=1&ref=world.; David Faris, "Revolutions without Revolutionaries? Network Theory, Facebook, and the Egyptian Blogosphere," *Arab Media & Society* 6 (Fall 2008), www.arabmediasociety.com/?article=694; Bikya Masr, "Stop, Look, What's that Sound. . .the Death of Egyptian Activism," *BikyaMasr*, February 8, 2009, http://bikyamasr.wordpress.com/2009/08/02/bm-opinion-stop-look-whats-that-sound-the-death-of-egyptian-activism/. For instance, the creators of a Facebook "Save the Children of

Africa" application attracted 1.3 million members, who collectively donated just over six thousand dollars. In Egypt, millions signed up for Facebook groups protesting government politics, but only a handful actually showed up in the streets to protest. Indeed, many Egyptian activists believe that cheap Internet solidarity actually harmed the protest movement, as would-be protesters stayed home and blogged.

16. Evan Kohlmann, "The Real Online Terrorist Threat," *Foreign Affairs* 85, no. 5 (September/October 2006) : 115–124; Marc Sageman, *Leaderless Jihad* (Chapel Hill, NC: University of North Carolina Press, 2008).
17. Cass Sunstein, "The Law of Group Polarization," in *Debating Deliberative Democracy*, ed. James Fishkin and Peter Laslett, 80–137 (New York: Oxford University Press, 2003).
18. Doug McAdam, Sidney Tarrow, and Charles Tilly, *Dynamics of Contention* (New York: Cambridge University Press, 2001).
19. Benkler and Shaw, *A Tale of Two Blogospheres*.
20. Morozov, "How Dictators Watch Us on the Web."
21. Steven Heydemann, *Upgrading Authoritarianism in the Arab World*, Analysis Paper no. 13 (Washington, DC: Brookings Institution, October 2007). www.brookings.edu/papers/2007/10arabworld.aspx.
22. Kevin Donovan, Twitter post, August 23, 2009, http://twitter.com/evgenymorozov/status/3489960834.
23. Ethan Zuckerman, "Meet the Bridgebloggers," *Public Choice* 134 (2008): 47–65; Marc Lynch, "Blogging the New Arab Public," *Arab Media & Society* 1 (Spring 2007), www.arabmediasociety.com/?article=10.
24. Margaret Keck and Kathryn Sikkink, *Activists Beyond Borders* (Ithaca, NY: Cornell University Press, 1998).
25. Jennifer Brinkenhoff, *Digital Diasporas* (Cambridge: Cambridge University Press, 2009); Clifford Bob, *The Marketing of Rebellion* (Cambridge: Cambridge University Press, 2006).
26. Steven Mufson, "Chinese Government Sharply Criticizes Clinton's Speech Urging Internet Freedom," *Washington Post*, January 23, 2010, www.washingtonpost.com/wp-dyn/content/article/2010/01/22/AR2010012201090.html?hpid=topnews&sid=ST2010012102095; Evgeny Morozov, "Is Hillary Clinton Launching a Cyber Cold War?" *foreignpolicy.com*, January 21, 2010, http://neteffect.foreignpolicy.com/posts/2010/01/21/cyber_cold_war.
27. Glassman and Doran, "The Soft Power Solution in Iran"; Nicholas Kristoff, "Tear Down This Cyberwall!" *New York Times*, June 17, 2009; National Iranian American Council, "NIAC Urges Swift Action on Internet Freedom," *niac.org*, March 2, 2010, www.niacouncil.org/site/News2?page=NewsArticle&id=5916.
28. International Telecommunications Union, *Measuring the Information Society: The ICT Development Index* (Geneva: International Telecommunications Union, 2009). Cell phone use has grown even more rapidly over the same period, from 3.4 percent to 41.8 percent.
29. Geneive Abdo and Jonathan Lyons, *Answering Only to God: Faith and Freedom in 21st Century Iran* (New York: Henry Holt, 2003); Asef Bayat, *Making Islam Democratic: Social Movements and the Post-Islamist Turn* (Stanford: Stanford University Press, 2007).
30. See Richard Weitz, "Iran's Grassroot Voices and the Blogosphere," *Eurasia Review*, April 14, 2010, www.eurasiareview.com/2010/04/irans-grassroots-voices-and-blogosphere.html.
31. Ronald Deibert, John G. Palfrey, Rafal, Rohozinski, and Jonathan Zittrain, *Access Denied: The Practice and Policy of Global Internet Filtering* (Cambridge: MIT Press, 2008).
32. John Kelly and Bruce Etling, "Mapping Iran's Online Public: Politics and Culture in the Persian Blogosphere," Internet and Democracy Case Study Series (Cambridge, MA: Berkman Center Research Publication, Harvard University, April 2008); Nasrin Alavi, *We Are Iran: The Persian Blogs* (New York: Soft Skull Press, 2005).
33. Ali Erfan, "Reformist Musavi's Poll Strategy Backed by West, BBC-Iran Analyst," BBC Worldwide Monitoring, July 26, 2009; Thomas Erdbrink, "In Iran Election, Tradition Competes with Web," *Washington Post*, June 9, 2009, www.washingtonpost.com/wp-dyn/content/article/2009/06/08/AR2009060804090.html.
34. Thomas Erdbrink, "Iran Blocks Facebook, Outlet for Opposition; Lively Discussions on June 12 Vote Took Place on Web Site," *Washington Post*, May 25, 2009, www.washingtonpost.com/wp-dyn/content/article/2009/05/24/AR2009052401599.html.
35. "Iranians Flood VOA with Videos, E-mails; Broadcaster Launches New Show," Voice of America, June 15, 2009, www.voanews.com/english/About/2009-06-15-iran-breakfast-show.cfm.
36. Ibid.
37. Mary Beth Sheridan, "Persian News Network Finds New Life in Contested Iranian Election," *Washington Post*, June 18, 2009, www.washingtonpost.com/wp-dyn/content/article/2009/06/17/AR2009061703853.html.
38. Glassman and Doran, "The Soft Power Solution in Iran"; Khalaji and Carpenter, "America and the Iran Political Reform Movement."
39. "Broadcasting Board of Governors Battles Signal Interference by Multiplying Broadcasts of Persian Programs to Iran," Broadcasting Board of Governors, June 22, 2009, www.bbg.gov/pressroom/pressreleases-article.cfm?articleID=421.
40. Ibid.

41. O. Britsyna and I. Golovakha, "The Folklore of the Orange Revolution." *Folklorica* 10, no. 1 (2005): 3–18.
42. Kelly and Etling, "Mapping Iran's Online Public."
43. Alavi, *We Are Iran*.
44. Kelly and Etling, "Mapping Iran's Online Public."
45. Ibid.
46. Alireza Doostdar, "The Vulgar Spirit of Blogging: On Language, Culture, and Power in Persian Weblogestan," *American Anthropologist* 106, no. 4 (2004): 651–662.
47. Marc Ambinder, "The Revolution Will Be Twittered," *Atlantic*, June 15, 2009, http://politics.theatlantic.com/2009/06/its_too_easy_to_call.php; Peggy Noonan, "Whose Side Are We On? You Have to Ask?" *Wall Street Journal*, June 19, 2009, http://online.wsj.com/article/SB124535660563828707.html; Brad Stone and Noam Cohen, "Social Networks Spread Defiance Online," New York Times, June 15, 2009, www.nytimes.com/2009/06/16/world/middleeast/16media.html; Andrew Sullivan, "The Revolution Will Be Twittered," *Atlantic*, June 13, 2009, http://andrewsullivan.theatlantic.com/the_daily_dish/2009/06/the-revolution-will-be-twittered-1.html.
48. "Technology and U.S. Foreign Policy," *Tehran Bureau*, December 31, 2009, www.pbs.org/wgbh/pages/frontline/tehranbureau/2009/12/technology-and-foreign-policy-in-iran.html.
49. "A Look at Twitter in Iran," Sysomos Blog, June 21, 2009, http://blog.sysomos.com/2009/06/21/a-look-at-twitter-in-iran/; Gaurav Mishra, "Updated: The Irony of Iran's 'Twitter Revolution,'" Gauravonomics Blog on Social Media and Social Change, June 17, 2009, www.gauravonomics.com/blog/the-irony-of-irans-twitter-revolution/. It is not clear where Mishra's data comes from.
50. Nick Burcher, "Facebook User Numbers by Country and Facebook Usage by Country as Percentage of Population," *nickburcher.com*, www.nickburcher.com/2008/07/facebook-user-numbers-by-country-and.html; Christina Neumayer and Celina Raffl, "Facebook for Protest? The Value of Social Software for Political Activism in the Anti-FARC Rallies," DigiActive Research Series, December 2008, www.digiactive.org/wp-content/uploads/research1_neumayerraffl.pdf.
51. Scott Baldauf, "Positive Radio Brings Calm to Tense Kenya Slum," *Christian Science Monitor*, January 11, 2008; Ivor Tossell, "Understanding Kenya, One Click at a Time," *Globe and Mail*, February 15, 2008.
52. Aidan Lewis, "BBC Persian Works Round Restriction," BBC, June 23, 2009, http://news.bbc.co.uk/2/hi/middle_east/8113882.stm.
53. Joshua Tucker, "From Kiev to Tehran? Can Ukraine's Orange Revolution Teach Us Anything about Today's Protests in Iran?" *New Republic*, June 15, 2009, www.tnr.com/article/politics/kiev-tehran.
54. Tara Mahtafar, "United Students of Iran," *Tehran Bureau*, December 17, 2009, www.pbs.org/wgbh/pages/frontline/tehranbureau/2009/12/united-students-of-iran.html.
55. Sibylla Brodzinksy, "Facebook Used to Target Colombia's FARC with Global Rally," *Christian Science Monitor*, February 4, 2008, www.csmonitor.com/2008/0204/p04s02-woam.html.
56. Robert Benford and David Snow, "Framing Processes and Social Movements: An Overview and Assessment," *Annual Review of Sociology* 26 (August 2000): 611–639.
57. Ibid.
58. Suad Jafarzadeh, "Neda's Death in Street Creates an Internet Icon," *Washington Times*, June 24, 2009, www.allbusiness.com/government/elections-politics-politics-political-parties/12531134-1.html; Robert Tait and Matthew Weaver, "The Accidental Martyr: How Neda Became the Face of Iran's Struggle," *Guardian* (London), June 23, 2009.
59. Susanne Lohmann, "The Dynamics of Information Cascades: The Monday Demonstrations in Leipzig, East Germany, 1989–1991." *World Politics* 47, no. 1 (1994): 42–101.
60. Evgeny Morozov, "Why the Internet Is Failing Iran's Activists," *Prospect*, January 5, 2010, www.prospect-magazine.co.uk/2010/01/why-the-internet-is-failing-irans-activists/.
61. Jim Cowie, "A Closer Look at Iran's State of Internet, Strange Transit Changes in Wake of Controversial Election," CircleID Internet Infrastructure, June 14, 2009, www.circleid.com/posts/20090614_closer_look_at_iran_internet_strange_changes.
62. Rob Faris and Rebekah Heacock, "Cracking Down on Digital Communication, Political Organizing in Iran," Open Net Initiative, June 15, 2009, http://opennet.net/blog/2009/06/cracking-down-digital-communication-and-political-organizing-iran.
63. Brian Stelter and Brad Stone, "Web Pries Lid Off Censorship a Bit," *New York Times*, June 22, 2009, www.nytimes.com/2009/06/23/world/middleeast/23censor.html.
64. Faris and Heacock, "Cracking Down on Digital Communication."
65. Christopher Rhoads and Geoffrey A. Fowler, "Iran Pro-Regime Voices Multiply Online," *Wall Street Journal*, July 3, 2009, http://online.wsj.com/article/SB124658422588090107.html.
66. Erfan, "Reformist Musavi's Poll Strategy Backed by West."
67. "US Admission of Involvement in Iran Unrest Shows 'Plot' Failure," BBC Worldwide Monitoring, August 19, 2009, www.monitor.bbc.co.uk/.

68. Ricky Ben-David and Rachel Geizhals, "Daily Denies Alleged Israeli 'Conspiracy' to 'Stoke Unrest' in Iran via Twitter," BBC Monitoring Middle East, June 18, 2009.
69. Rhoads and Fowler, "Iran Pro-Regime Voices Multiply Online."
70. Keck and Sikkink, *Activists Beyond Borders*.
71. Neri Zilber, "Global Solidarity 2.0," *Tehran Bureau*, August 4, 2009, www.pbs.org/wgbh/pages/frontline/tehranbureau/2009/08/global-solidarity-20.html. The activities of the United for Iran network can be seen at http://united4iran.com/.

About the Institute

The United States Institute of Peace is an independent, nonpartisan institution established and funded by Congress. Its goals are to help prevent and resolve violent conflicts, promote post-conflict peacebuilding, and increase conflict management tools, capacity, and intellectual capital worldwide. The Institute does this by empowering others with knowledge, skills, and resources, as well as by its direct involvement in conflict zones around the globe.

PEACEWORKS • AUGUST 2010 • NO. 65

From Iran to Kenya to Colombia, the impact of new and social media on movements for political and social change has been the subject of much discussion and controversy. In this report from the United States Institute of Peace's Centers of Innovation for Science, Technology, and Peacebuilding, and Media, Conflict, and Peacebuilding, a team of scholars from The George Washington University, in cooperation with scholars from Harvard University and Morningside Analytics, takes a fresh theoretical and empirical approach to this question. The paper critically assesses both the "cyberutopian" and "cyberskeptic" perspectives and proposes a more complex approach that looks at the role of new media in contentious politics from five interlocking levels of analysis: individual transformation, intergroup relations, collective action, regime policies, and external attention.

PEACEWORKS

UNITED STATES INSTITUTE OF PEACE • 1200 17TH STREET NW • WASHINGTON, DC 20036 • USIP.ORG